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Winter 1999/2000 **Official voice of the Air Force Research Laboratory**

Provider of magnet technology dies in crash

by Timothy Anderl, AFRL Headquarters

WRIGHT-PATTERSON AFB, OHIO — Marlin S. Walmer, a materials scientist who played an immense role in the manufacture and transition of rare earth cobalt magnet technology to high end Air Force and Department of Defense systems, died in an airplane crash December 12, 1999.

"Mr. Walmer was a tremendous friend to the Air Force and Technology," said Dr. Wade Adams, Chief Scientist of the Materials and Manufacturing Directorate. "The rare earth cobalt magnet program that he was involved with, which had its beginnings in-house at the Air Force Materials Laboratory in the late 60's, is still reaping tremendous benefits for military and commercial technologies 35 years later."

The founder and president of Electronic Energy Corporation, Walmer supplied advance magnet technology for several very important Air Force applications including: Traveling Wave Tubes for Satellite Communication Systems, over 2,300 units of which have been launched into space; Missile Accelerometers, Gyros, and Inertial Reference Systems for Missile Guidance Systems, which are used in more than 10,000 missiles and launch vehicles; and Microwave Tubes used in all Aircraft Tactical Radar Systems.

Most recently, the Air Force has had a renewed interest in developing improved rare earth cobalt magnets due to a new requirement for improved magnetic materials for Aircraft Fly-By-Wire and More Electric Aircraft concepts, which have been applied to the Stealth Bomber and NC-141A Electric Starlifter.

Walmer had, as recently as his visit to Wright-Patterson AFB this September, been providing his expertise and his ideas on how to satisfy these new requirements thus extending his relationship with the Air Force research and development community from the early 70s to the present.

"Rare earth cobalt magnets have led to a ten billion dollar industry," Adams said. "These magnets are more powerful for their weight and size, easier to assemble into manufactured products and have a higher temperature resistance than any other magnet."

Walmer's contributions also made their way into major commercial technologies such as powerful microwave tubes for commercial television broadcasting via stationary satellites, disk drive motors for personal computers, modern dental and surgical power tools, and most recently for large medical instruments such as Magnetic Resonance Imaging Systems. The 10 billion dollar rare earth magnet industry which Walmer helped to create is presently growing at a 14 to 16 percent annual rate and has resulted in the creation of hundreds of US manufacturing jobs.

Walmer, an experienced pilot of 30 years, was flying alone in his single-engine airplane from Spokane, Wash., to South Dakota on business, when the plane began losing power and disappeared from Salt Lake City Airport's radar screens. The crash site airplane was found December 13, 1999 in the Rattlesnake Range of the Northern Rockies. **@**